

What is claimed is:

1. A data transmission apparatus comprising:
  - a data generator that generates data transmitted to a data reception apparatus;
  - a data analyzer that analyzes data received from the data reception apparatus;
  - a transmitter/receiver that transmits and receives data to and from the data reception apparatus; and
  - an individual compatibility information storage in which is stored a first function identification table with reference to which data communication functions used to perform data communication with the data reception apparatus are identified respectively for individual items of specific data with which the data reception apparatus permits itself to be identified,

wherein, when the specific data is fed through the data transmitter/receiver to the data analyzer, with reference to the first function identification table in the individual compatibility information storage, the data communication functions recognized from the specific data are identified and are brought into effect so that the data transmission apparatus is brought into a state communicable with the data reception apparatus that has transmitted the specific data thereto.
2. The data transmission apparatus according to claim 1, further comprising:
  - a communication interface that performs communication with a data communication administration server that administers, for each data transmission apparatus, a second function identification table in which are registered, for each data reception apparatus with which the data transmission apparatus can communicate, the specific data of the data reception apparatus and the data communication functions identified based on the specific data,

wherein, if it is recognized that the specific data received by the data transmitter/receiver is not registered in the first function identification table in the individual compatibility information storage, the data transmission apparatus receives, through the communication interface, contents of the second function identification table stored for the data transmission apparatus itself in the data communication administration server, and updates the first function identification table therewith.

3. The data transmission apparatus according to claim 2,

wherein in the data communication administration server are stored software programs that respectively realize the individual data communication functions, and

wherein, if it is recognized that any of the software programs that realize the data communication functions identified with reference to the first function identification table based on the specific data received by the transmitter/receiver is not present in the data transmission apparatus itself, the data transmission apparatus receives, through the communication interface, the software program from the data communication administration server, and brings into effect the data communication functions identified based on the specific data.

4. The data transmission apparatus according to claim 3,

wherein, when the data transmission apparatus is receiving the contents of the second function identification table or the software program from the data communication administration server, or when the data transmission apparatus is updating the first function identification table or the software program, shutting-down is prohibited.

5. A data transmission apparatus comprising:
- a data generator that generates data transmitted to a data reception apparatus;
  - a data analyzer that analyzes data received from the data reception apparatus;
  - a transmitter/receiver that transmits and receives data to and from the data reception apparatus; and
- an individual compatibility information storage in which is stored a first function identification table in which are recorded data communication functions corresponding respectively to individual codes contained in function data with which the reception apparatus permits data communication functions used for communication therewith to be identified,
- wherein, when the function data is fed through the data transmitter/receiver to the data analyzer, with reference to the first function identification table in the individual compatibility information storage, the data communication functions recognized from the codes contained in the function data are identified and are brought into effect so that the data transmission apparatus is brought into a state communicable with the data reception apparatus that has transmitted the function data thereto.

6. The data transmission apparatus according to claim 5, further comprising:
- a communication interface that performs communication with a data communication administration server that administers a second function identification table in which are registered the data communication functions assigned to all the codes contained in the function data,
- wherein, if it is recognized that any of the codes contained in the function data received by the data transmitter/receiver is not registered in the first function identification table in the individual compatibility information storage, the data transmission apparatus

receives, through the communication interface, contents of the second function identification table stored in the data communication administration server, and updates the first function identification table therewith.

7. The data transmission apparatus according to claim 6,  
wherein in the data communication administration server are stored software programs  
that respectively realize the individual data communication functions, and  
wherein, if it is recognized that any of the software programs that realize the data  
communication functions identified with reference to the first function identification table  
based on the function data received by the transmitter/receiver is not present in the data  
transmission apparatus itself, the data transmission apparatus receives, through the  
communication interface, the software program from the data communication administration  
server, and brings into effect the data communication functions identified based on the  
function data.

8. The data transmission apparatus according to claim 7,  
wherein, when the data transmission apparatus is receiving the contents of the second  
function identification table or the software program from the data communication  
administration server, or when the data transmission apparatus is updating the first function  
identification table or the software program, shutting-down is prohibited.

9. The data transmission apparatus according to claim 5,  
wherein the transmitter/receiver receives, for each data reception apparatus, specific  
data with which the data reception apparatus permits itself to be identified and that differs

from one data reception apparatus to another,

wherein in the individual compatibility information storage is further stored a first apparatus table in which are registered the specific data of any data reception apparatus with which the transmission apparatus can communicate, and

wherein, when the specific data is fed through the transmitter/receiver to the data analyzer, with reference to the first apparatus table in the individual compatibility information storage, whether or not the data transmission apparatus can communicate with the data reception apparatus identified based on the specific data is checked.

10. The data transmission apparatus according to claim 9, further comprising:

a communication interface that performs communication with a data communication administration server that administers, for each data transmission apparatus, a second apparatus table in which are registered, for each data reception apparatus with which the data transmission apparatus can communicate, the specific data,

wherein, if it is recognized that the specific data received by the data transmitter/receiver is not registered in the first apparatus table in the individual compatibility information storage, the data transmission apparatus receives, through the communication interface, contents of the second apparatus table stored for the data transmission apparatus itself in the data communication administration server, and updates the first apparatus table therewith.

11. The data transmission apparatus according to claim 10,

wherein, when the data transmission apparatus is receiving the contents of the second apparatus table from the data communication administration server, or when the data

transmission apparatus is updating the first apparatus table, shutting-down is prohibited.

12. The data transmission apparatus according to claim 1,  
wherein, when function changing is performed for a data reception apparatus provided with a plurality of combinations of data communication functions, the data communication functions that consist of optimum operation conditions are selected.
  
13. The data transmission apparatus according to claim 1,  
wherein, when function changing is performed for a data reception apparatus provided with a plurality of combinations of data communication functions, the data communication functions that consist of operation conditions close to operation conditions selected by a user are selected.
  
14. The data transmission apparatus according to claim 1, further comprising:  
an input section operated by a user,  
wherein, when function changing is performed for a data reception apparatus provided with a plurality of combinations of data communication functions, the data communication functions that are entered via the input section are selected.
  
15. The data transmission apparatus according to claim 1,  
wherein in the individual compatibility information storage is stored a previous setting table in which are registered, for each data reception apparatus, the data communication functions that were set when communication was performed therewith last time, and  
wherein, when function changing is performed for a data reception apparatus provided

with a plurality of combinations of data communication functions, the data communication functions that are registered in the previous setting table with respect to the data reception apparatus are selected.

16. The data transmission apparatus according to claim 1,  
wherein, among a plurality of combinations of data communication functions for a single data reception apparatus, one combination is dealt with as basic data communication functions, and

wherein, when function changing is performed for a data reception apparatus provided with a plurality of combinations of data communication functions, the basic data communication functions are selected.

17. The data transmission apparatus according to claim 1,  
wherein the data exchanged with the data reception apparatus is copyrighted data, and the data communication functions that are changed include a copyright encrypting method used by the data generator.

18. The data transmission apparatus according to claim 1,  
wherein the data exchanged with the data reception apparatus is AV data, and the data communication functions that are changed include at least one of data formats used by the data generator as corresponding to a compression method, a resolution, a bit rate, and a frame rate of a video signal in the AV data.

19. The data transmission apparatus according to claim 1,

wherein the data exchanged with the data reception apparatus is AV data, and the data communication functions that are changed include at least one of data formats used by the data generator as corresponding to a compression method and a bit rate of an audio signal in the AV data.

20. The data transmission apparatus according to claim 1,  
wherein the data communication functions that are changed include a data format used by the data generator as corresponding to an optimum packet data length in the data.

21. The data transmission apparatus according to claim 1,  
wherein the data communication functions that are changed include a data format used by the data analyzer to analyze the data received from the data reception apparatus in the transmitter/receiver.

22. The data transmission apparatus according to claim 1,  
wherein, when the data communication functions are being changed, shutting-down is prohibited.

23. A data reception apparatus comprising:  
a data analyzer that analyzes data received from a data transmission apparatus;  
a data generator that generates data transmitted to the data transmission apparatus;  
a transmitter/receiver that transmits and receives data to and from the data transmitting apparatus; and  
a specific data storage in which is stored specific data with which the data reception

apparatus permits itself to be identified,

wherein the specific data read out from the specific data storage is transmitted from the transmitter/receiver to the data transmission apparatus so that a data communication function compatible with the data receiving apparatus is identified and brought into effect in the data transmission apparatus so that the data transmission apparatus is brought into a state communicable with the data reception apparatus.

24. The data reception apparatus according to claim 23, further comprising:

an input section operated by a user,

wherein, when a plurality of data communication function are provided, the data communication function that is entered via the input section is transmitted from the transmitter/receiver to the data transmission apparatus so as to notify the data transmission apparatus of the data communication function.

25. A data reception apparatus comprising:

a data analyzer that analyzes data received from a data transmission apparatus;

a data generator that generates data transmitted to the data transmission apparatus;

a transmitter/receiver that transmits and receives data to and from the data transmitting apparatus; and

a specific data storage in which is stored function data composed of codes with which the data reception apparatus permits a data communication function that needs to be used in communication therewith to be identified,

wherein the function data read out from the specific data storage is transmitted from the transmitter/receiver to the data transmission apparatus so that the data communication

function compatible with the data receiving apparatus is identified and brought into effect in the data transmission apparatus so that the data transmission apparatus is brought into a state communicable with the data reception apparatus.

26. The data reception apparatus according to claim 25,  
wherein in the specific data storage is also stored specific data that permits the data transmission apparatus itself to be identified and that differs from one data reception apparatus to another, and the specific data is transmitted along with the function data from the transmitter/receiver.

27. The data reception apparatus according to claim 26,  
wherein in the specific data storage is stored apparatus data composed of the specific data and the function data, and the apparatus data is transmitted from the transmitter/receiver.

28. A data communication system comprising:  
the data transmission apparatus according to claim 1; and  
the data reception apparatus that performs data communication with the data transmission apparatus,  
wherein, when the data transmission apparatus performs data communication with the data reception apparatus, the data communication functions compatible with the data reception apparatus are used.

29. A data communication system comprising:  
the data reception apparatus according to claim 23; and

the data transmission apparatus that performs data communication with the data reception apparatus,

wherein, when the data transmission apparatus performs data communication with the data reception apparatus, the data communication functions compatible with the data reception apparatus are used.

30. A data communication system comprising:

the data reception apparatus according to claim 25; and

the data transmission apparatus that performs data communication with the data reception apparatus,

wherein, when the data transmission apparatus performs data communication with the data reception apparatus, the data communication functions compatible with the data reception apparatus are used.

31. A data communication administration server comprising:

a communication interface that exchanges data with the data transmission apparatus according to claim 2; and

a recording device for storing data transmitted from the communication interface to the data transmission apparatus.